SUBSTITUTE ABSTRACT OF THE DISCLOSURE

An InGaAlAs-based buried type laser is expected to improve properties of the device, but generates defects at a re-growth interface and is difficult to realize a long-term reliability necessary for optical communication, due to inclusion of Al in an active layer. A semiconductor optical device and an optical module including a package substrate and a semiconductor optical device mounted on the package substrate are provided, whereby there are realized the improvement of device properties and the long-term reliability through the use of an Al composition ratio-reduced tensile strained quantum well layer.